

What is claimed is:

1. A semiconductor device comprising:
a semiconductor element including an electrode formed on an electrode-formed surface thereof;

5 a reinforcing member bonded to a back surface of said semiconductor element, said back surface being opposite to said electrode-formed surface; and

an adhesive bonding said semiconductor element and said reinforcing member while allowing said semiconductor element to be deformed.

10 2. The semiconductor device of claim 1, wherein said adhesive is made of resin having a low elastic modulus, and bonds said back surface of said semiconductor element entirely to said reinforcing member.

15 3. The semiconductor device of claim 1, wherein said adhesive bonds only a center of said back surface of said semiconductor element to said reinforcing member.

20 4. The semiconductor device of claim 1, wherein said reinforcing member has a flexural rigidity greater than a flexural rigidity of said semiconductor element.

5. The semiconductor device of claim 1, wherein said reinforcing member is larger than said semiconductor element in outside shape.

25 6. The semiconductor device of claim 5, wherein said reinforcing member includes:

a recess portion to which said semiconductor element is bonded; and
a projection formed at a border of said recess portion.

7. The semiconductor device of claim 1, wherein said reinforcing
5 member functions as a holding member in handling.

8. The semiconductor device of claim 1, wherein an identification
information is applied to an applied surface of said reinforce member, said
applied surface being opposite to a surface bonded to said semiconductor
10 element.

9. A method of manufacturing a semiconductor device, comprising the
steps of:

shaving a back surface of a semiconductor wafer, said back surface
15 being opposite to an electrode-formed surface of said semiconductor wafer
including a plurality of semiconductor elements therein;

bonding a reinforcing plate to the shaved back surface of the
semiconductor wafer with an adhesive; and

dividing the semiconductor wafer to which the reinforcing member is
20 bonded and the reinforcing plate into units of the semiconductor elements.

10. The method of claim 9, wherein said step of dividing the
semiconductor wafer and the reinforcing plate includes the sub step of
dividing the reinforcing plate with a dicing width smaller than a dicing width
25 of the semiconductor wafer.

11. The method of claim 9, further comprising the step of attaching a

sheet to the electrode-formed surface of the semiconductor wafer, wherein said step of shaving the back surface of the semiconductor wafer includes the sub step of shaving the back surface of the semiconductor wafer while the sheet is attached to the electrode-formed surface of the semiconductor wafer.

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12. The method of claim 9, further comprising the step of forming a bump on the electrode-formed surface of the semiconductor wafer.

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13. A method of manufacturing a semiconductor device, comprising the steps of:

forming a diced groove along a border between a plurality of semiconductor elements from an electrode-formed surface of a semiconductor wafer which includes the semiconductor elements formed therein;

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attaching a sheet to the electrode-formed surface of the semiconductor wafer having the diced groove;

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dividing the semiconductor wafer into the semiconductor elements through shaving a back surface of the semiconductor wafer to thin the semiconductor wafer to a thickness until the shaved back surface reaches the diced groove, said back surface being opposite to the electrode-formed surface to which the sheet is attached;

bonding a reinforcing plate to the back surface of the semiconductor elements with an adhesive; and

dividing the reinforcing plate into units of the semiconductor elements after removing the sheet from the electrode-formed surface.

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14. The method of claim 13, wherein said step of dividing the reinforcing plate includes the sub step of dividing the reinforcing plate with a

dicing width smaller than the diced groove of the semiconductor wafer.

15. A method of manufacturing a semiconductor device, comprising the steps of:

5 shaving a back surface of a semiconductor wafer, the back surface being opposite to an electrode-formed surface of the semiconductor wafer which includes a plurality of semiconductor elements;

dividing the semiconductor wafer into the semiconductor elements; and

10 bonding a reinforcing member to a back surface of each of the semiconductor elements with an adhesive.

16. The method of claim 15, further comprising the step of attaching a sheet to the electrode-formed surface of the semiconductor wafer, wherein said step of shaving the back surface of the semiconductor wafer includes the sub
15 step of shaving the back surface of the semiconductor wafer to which the sheet is attached.

17. The method of claim 15, further comprising the step of forming a bump on the electrode-formed surface of the semiconductor wafer.

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18. A method of mounting a semiconductor device which includes:

a semiconductor element having an electrode-formed surface;

a reinforcing member bonded to a back surface of the semiconductor element with allowing the semiconductor element to be deformed, the back
25 surface being opposite the electrode-formed surface; and

an adhesive bonding the semiconductor element to the reinforcing member,

said method comprising the steps of:

holding the reinforcing member; and

mounting the semiconductor device to a workpiece, the semiconductor device having the reinforcing member held.

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19. The method of claim 18,

wherein the reinforcing member includes a recess portion to which the semiconductor element is bonded and a projection formed at a border of the recess portion, and

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wherein said step of mounting the semiconductor device includes the sub step of bonding the projection to the workpiece.